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Sequence Listing was accepted.

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Reviewer: Anne Corrigan

Timestamp: [year=2010; month=7; day=27; hr=8; min=52; sec=27; ms=105;]

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Application No: 10560790

Version No: 4.0

Input Set:**Output Set:****Started:** 2010-07-21 11:51:03.120**Finished:** 2010-07-21 11:51:06.052**Elapsed:** 0 hr(s) 0 min(s) 2 sec(s) 932 ms**Total Warnings:** 20**Total Errors:** 0**No. of SeqIDs Defined:** 20**Actual SeqID Count:** 20

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Input Set:

Output Set:

Started: 2010-07-21 11:51:03.120
Finished: 2010-07-21 11:51:06.052
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Total Warnings: 20
Total Errors: 0
No. of SeqIDs Defined: 20
Actual SeqID Count: 20

Error code

Error Description

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SEQUENCE LISTING

<110> Ghosh, Peter

<120> CONNECTIVE TISSUE DERIVED POLYPEPTIDES

<130> 10682.10USWO

<140> 10560790

<141> 2005-12-15

<150> PCT/AU2004/000788

<151> 2004-06-17

<150> AU 2003903037

<151> 2003-06-17

<160> 20

<170> PatentIn version 3.3

<210> 1

<211> 178

<212> PRT

<213> Artificial Sequence

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<223> Partial sequence of bovine NC4 domain of Type IX collagen alpha 1 chain

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1 5 10 15

Pro Lys Val Arg Ile Gly Gln Asp Asp Leu Pro Gly Phe Asp Leu Ile
20 25 30

Ser Gln Phe Gln Ile Asp Lys Ala Ala Ser Arg Arg Ala Ile Gln Arg
35 40 45

Val Val Gly Ser Thr Ala Leu Gln Val Ala Tyr Lys Leu Gly Asn Asn
50 55 60

Val Asp Phe Arg Thr Arg His Leu Tyr Pro Asn Gly Leu Pro Glu Glu
65 70 75 80

Tyr Ser Phe Leu Thr Thr Phe Arg Met Thr Gly Ser Thr Leu Gly Lys
85 90 95

His Trp Ser Ile Trp Gln Ile Gln Asp Ser Ser Gly Lys Glu Gln Val
100 105 110

Gly Val Lys Ile Asn Gly Gln Thr Lys Ser Val Ser Phe Ser Tyr Lys
115 120 125

Gly Leu Asp Gly Ser Leu Gln Thr Ala Ala Phe Ser Asn Leu Pro Ser
130 135 140

Leu Phe Asp Ser Gln Trp His Lys Ile Met Ile Gly Val Glu Arg Ser
145 150 155 160

Ser Ala Thr Leu Phe Val Asp Cys Asn Arg Ile Glu Ser Leu Pro Ile
165 170 175

Lys Pro

<210> 2
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Type IX collagen alpha 1 chain peptide

<400> 2

Lys Ser Val Ser Phe Ser Tyr Lys Gly
1 5

<210> 3
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<213> Artificial Sequence

<220>
<223> Type IX collagen alpha 1 chain peptide

<400> 3

Lys Ile Met Ile Gly Val Glu Arg Ser
1 5

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<223> Type IX collagen alpha 1 chain peptide

<400> 4

Lys Leu Gly Asn Asn Val Asp Phe Arg Ile

1 5 10

<210> 5

<211> 11

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<223> Type IX collagen alpha 1 chain peptide

<400> 5

Arg Ile Glu Ser Leu Pro Ile Lys Pro Arg Gly

1 5 10

<210> 6

<211> 15

<212> PRT

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<223> Type IX collagen alpha 1 chain peptide

<400> 6

Lys His Trp Ser Ile Trp Gln Ile Gln Asp Ser Ser Gly Lys Glu

1 5 10 15

<210> 7

<211> 21

<212> PRT

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<220>

<223> Type IX collagen alpha 1 chain peptide

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Arg Ile Gly Gln Asp Asp Leu Pro Gly Phe Asp Leu Ile Ser Gln Phe

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Gln Ile Asp Lys Ala

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<223> Type IX collagen alpha 1 chain peptide

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Arg His Leu Tyr Pro Asn Gly Leu Pro Glu Glu Tyr Ser Phe Leu Thr

1 5 10 15

Thr Phe Arg Met

20

<210> 9

<211> 26

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<220>

<223> Type IX collagen alpha 1 chain peptide

<400> 9

Lys Gly Leu Asp Gly Ser Leu Gln Thr Ala Ala Phe Ser Asn Leu Pro

1 5 10 15

Ser Leu Phe Asp Ser Gln Trp His Lys Ile

20 25

<210> 10

<211> 9

<212> PRT

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<223> Type IX collagen alpha 1 chain peptide

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Lys Ile Met Ile Gly Val Glu Arg Ser

1 5

<210> 11

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<212> PRT

<213> Artificial Sequence

<220>

<223> Type IX collagen alpha 1 chain peptide

<400> 11

Arg Ser Ser Ala Thr Leu Phe Val Asp Cys Asn Arg Ile
1 5 10

<210> 12

<211> 439

<212> PRT

<213> Artificial Sequence

<220>

<223> Cartilage oligomeric matrix protein [Fragment] - bovine

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Asp Gly Val Leu Asn Glu Lys Asp Asn Cys Pro Leu Val Arg Asn Pro
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Asp Gln Arg Asn Thr Asp Gly Asp Lys Trp Gly Asp Ala Cys Asp Asn
20 25 30

Cys Arg Ser Gln Lys Asn Asp Asp Gln Lys Asp Thr Asp Lys Asp Gly
35 40 45

Arg Gly Asp Ala Cys Asp Asp Asp Ile Asp Gly Asp Arg Ile Arg Asn
50 55 60

Pro Val Asp Asn Cys Pro Lys Val Pro Asn Ser Asp Gln Lys Asp Thr
65 70 75 80

Asp Gly Asp Gly Val Gly Asp Ala Cys Asp Asn Cys Pro Gln Lys Ser
85 90 95

Asn Ala Asp Gln Arg Asp Val Asp His Asp Phe Val Gly Asp Ala Cys
100 105 110

Asp Ser Asp Gln Asp Gln Asp Gly Asp Gly His Gln Asp Ser Lys Asp
115 120 125

Asn Cys Pro Thr Val Pro Asn Ser Ala Gln Gln Asp Ser Asp His Asp
130 135 140

Gly Gln Gly Asp Ala Cys Asp Asp Asp Asp Asp Asn Asp Gly Val Pro
145 150 155 160

Asp Ser Arg Asp Asn Cys Arg Leu Val Pro Asn Pro Gly Gln Glu Asp
165 170 175

Met Asp Arg Asp Gly Val Gly Asp Ala Cys Gln Gly Asp Phe Asp Ala
180 185 190

Asp Lys Val Val Asp Lys Ile Asp Val Cys Pro Glu Asn Ala Glu Val
195 200 205

Thr Leu Thr Asp Phe Arg Ala Phe Gln Thr Val Val Leu Asp Pro Glu
210 215 220

Gly Asp Ala Gln Ile Asp Pro Asn Trp Val Val Leu Asn Gln Gly Met
225 230 235 240

Glu Ile Val Gln Thr Met Asn Ser Asp Pro Gly Leu Cys Val Gly Tyr
245 250 255

Thr Ala Phe Asn Gly Val Asp Phe Glu Gly Pro Phe His Val Asn Thr
260 265 270

Ala Thr Asp Asp Asp Tyr Ala Gly Phe Ile Phe Gly Tyr His His Ser
275 280 285

Ser Ser Phe Tyr Val Val Met Trp Lys Gln Met Glu Gln Thr Tyr Trp
290 295 300

Gln Ala Asn Pro Phe Arg Ala Val Ala Glu Pro Gly Ile Gln Leu Lys
305 310 315 320

Ala Val Lys Ser Ser Thr Gly Pro Gly Glu Gln Leu Arg Asn Ala Leu
325 330 335

Trp His Thr Gly Asp Thr Ala Ser Gln Val Arg Leu Leu Trp Lys Asp
340 345 350

Pro Arg Asn Val Gly Trp Lys Asp Lys Thr Ser Tyr Arg Trp Phe Leu
355 360 365

Gln His Arg Pro Gln Val Gly Tyr Ile Arg Val Arg Phe Tyr Glu Gly
370 375 380

Pro Glu Leu Val Ala Asp Ser Asn Val Ile Leu Asp Thr Thr Met Arg
385 390 395 400

Gly Gly Arg Leu Gly Val Phe Cys Phe Ser Gln Glu Asn Ile Ile Trp
405 410 415

Ala Asn Leu Arg Tyr Arg Cys Asn Asp Thr Ile Pro Glu Asp Tyr Glu
420 425 430

Ala Gln Arg Leu Leu Gln Ala
435

<210> 13

<211> 159

<212> PRT

<213> Artificial Sequence

<220>

<223> Odorant-binding protein - bovine

<400> 13

Ala Gln Glu Glu Glu Ala Glu Gln Asn Leu Ser Glu Leu Ser Gly Pro
1 5 10 15

Trp Arg Thr Val Tyr Ile Gly Ser Thr Asn Pro Glu Lys Ile Gln Glu
20 25 30

Asn Gly Pro Phe Arg Thr Tyr Phe Arg Glu Leu Val Phe Asp Asp Glu
35 40 45

Lys Gly Thr Val Asp Phe Tyr Phe Ser Val Lys Arg Asp Gly Lys Trp
50 55 60

Lys Asn Val His Val Lys Ala Thr Lys Gln Asp Asp Gly Thr Tyr Val
65 70 75 80

Ala Asp Tyr Glu Gly Gln Asn Val Phe Lys Ile Val Ser Leu Ser Arg
85 90 95

Thr His Leu Val Ala His Asn Ile Asn Val Asp Lys His Gly Gln Thr
100 105 110

Thr Glu Leu Thr Glu Leu Phe Val Lys Leu Asn Val Glu Asp Glu Asp
115 120 125

Leu Glu Lys Phe Trp Lys Leu Thr Glu Asp Lys Gly Ile Asp Lys Lys
130 135 140

Asn Val Val Asn Phe Leu Glu Asn Glu Asp His Pro His Pro Glu
145 150 155

<210> 14

<211> 245

<212> PRT

<213> Artificial Sequence

<220>

<223> human collagen type IX NC4 domain

<400> 14

Ala Val Lys Arg Arg Pro Arg Phe Pro Val Asn Ser Asn Ser Asn Gly
1 5 10 15

Gly Asn Glu Leu Cys Pro Lys Ile Arg Ile Gly Gln Asp Asp Leu Pro
20 25 30

Gly Phe Asp Leu Ile Ser Gln Phe Gln Val Asp Lys Ala Ala Ser Arg
35 40 45

Arg Ala Ile Gln Arg Val Val Gly Ser Ala Thr Leu Gln Val Ala Tyr
50 55 60

Lys Leu Gly Asn Asn Val Asp Phe Arg Ile Pro Thr Arg Asn Leu Tyr
65 70 75 80

Pro Ser Gly Leu Pro Glu Glu Tyr Ser Phe Leu Thr Thr Phe Arg Met
85 90 95

Thr Gly Ser Thr Leu Lys Lys Asn Trp Asn Ile Trp Gln Ile Gln Asp
100 105 110

Ser Ser Gly Lys Glu Gln Val Gly Ile Lys Ile Asn Gly Gln Thr Gln
115 120 125

Ser Val Val Phe Ser Tyr Lys Gly Leu Asp Gly Ser Leu Gln Thr Ala
130 135 140

Ala Phe Ser Asn Leu Ser Ser Leu Phe Asp Ser Gln Trp His Lys Ile
145 150 155 160

Met Ile Gly Val Glu Arg Ser Ser Ala Thr Leu Phe Val Asp Cys Asn

165

170

175

Arg Ile Glu Ser Leu Pro Ile Lys Pro Arg Gly Pro Ile Asp Ile Asp
180 185 190

Gly Phe Ala Val Leu Gly Lys Leu Ala Asp Asn Pro Gln Val Ser Val
195 200 205

Pro Phe Glu Leu Gln Trp Met Leu Ile His Cys Asp Pro Leu Arg Pro
210 215 220

Arg Arg Glu Thr Cys His Glu Leu Pro Ala Arg Ile Thr Pro Ser Gln
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Thr Thr Asp Glu Arg
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<210> 15

<211> 921

<212> PRT

<213> Artificial Sequence

<220>

<223> human alpha (IX) chain precursor

<400> 15

Met Lys Thr Cys Trp Lys Ile Pro Val Phe Phe Phe Val Cys Ser Phe
1 5 10 15

Leu Glu Pro Trp Ala Ser Ala Ala Val Lys Arg Arg Pro Arg Phe Pro
20 25 30

Val Asn Ser Asn Ser Asn Gly Gly Asn Glu Leu Cys Pro Lys Ile Arg
35 40 45

Ile Gly Gln Asp Asp Leu Pro Gly Phe Asp Leu Ile Ser Gln Phe Gln
50 55 60

Val Asp Lys Ala Ala Ser Arg Arg Ala Ile Gln Arg Val Val Gly Ser
65 70 75 80

Ala Thr Leu Gln Val Ala Tyr Lys Leu Gly Asn Asn Val Asp Phe Arg
85 90 95

Ile Pro Thr Arg Asn Leu Tyr Pro Ser Gly Leu Pro Glu Glu Tyr Ser
100 105 110

Phe Leu Thr Thr Phe Arg Met Thr Gly Ser Thr Leu Lys Lys Asn Trp
115 120 125

Asn Ile Trp Gln Ile Gln Asp Ser Ser Gly Lys Glu Gln Val Gly Ile
130 135 140

Lys Ile Asn Gly Gln Thr Gln Ser Val Val Phe Ser Tyr Lys Gly Leu
145 150 155 160

Asp Gly Ser Leu Gln Thr Ala Ala Phe Ser Asn Leu Ser Ser Leu Phe
165 170 175

Asp Ser Gln Trp His Lys Ile Met Ile Gly Val Glu Arg Ser Ser Ala
180 185 190

Thr Leu Phe Val Asp Cys Asn Arg Ile Glu Ser Leu Pro Ile Lys Pro
195 200 205

Arg Gly Pro Ile Asp Ile Asp Gly Phe Ala Val Leu Gly Lys Leu Ala
210 215 220

Asp Asn Pro Gln Val Ser Val Pro Phe Glu Leu Gln Trp Met Leu Ile
225 230 235 240

His Cys Asp Pro Leu Arg Pro Arg Arg Glu Thr Cys His Glu Leu Pro
245 250 255

Ala Arg Ile Thr Pro Ser Gln Thr Thr Asp Glu Arg Gly Pro Pro Gly
260 265 270

Glu Gln Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Val Pro Gly Ile
275 280 285

Asp Gly Ile Asp Gly Asp Arg Gly Pro Lys Gly Pro Pro Gly Pro Pro
290 295 300

Gly Pro Ala Gly Glu Pro Gly Lys Pro Gly Ala Pro Gly Lys Pro Gly
305 310 315 320

Thr Pro Gly Ala Asp Gly Leu Thr Gly Pro Asp Gly Ser Pro Gly Ser

325

330

335

Ile Gly Ser Lys Gly Gln Lys Gly Glu Pro Gly Val Pro Gly Ser Arg
340 345 350

Gly Phe Pro Gly Arg Gly Ile Pro Gly Pro Pro Gly Pro Pro Gly Thr
355 360 365

Ala Gly Leu Pro Gly Glu Leu Gly Arg Val Gly Pro Val Gly Asp Pro
370 375 380

Gly Arg Arg Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro Arg Gly
385 390 395 400

Thr Ile Gly Phe His Asp Gly Asp Pro Leu Cys Pro Asn Ala Cys Pro
405 410 415

Pro Gly Arg Ser Gly Tyr Pro Gly Leu Pro Gly Met Arg Gly His Lys
420 425 430

Gly Ala Lys Gly Glu Ile Gly Glu Pro Gly Arg Gln Gly His Lys Gly
435 440 445

Glu Glu Gly Asp Gln Gly Glu Leu Gly Glu Val Gly Ala Gln Gly Pro
450 455 460

Pro Gly Ala Gln Gly Leu Arg Gly Ile Thr Gly Ile Val Gly Asp Lys
465 470 475 480

Gly Glu Lys Gly Ala Arg Gly Leu Asp Gly Glu Pro Gly Pro Gln Gly
485 490 495

Leu Pro Gly Ala Pro Gly Asp Gln Gly Gln Arg Gly Pro Pro Gly Glu
500 505 510

Ala Gly Pro Lys Gly Asp Arg Gly Ala Glu Gly Ala Arg Gly Ile Pro
515 520 525

Gly Leu Pro Gly Pro Lys Gly Asp Thr Gly Leu Pro Gly Val Asp Gly
530 535 540

Arg Asp Gly Ile Pro Gly Met Pro Gly Thr Lys Gly Glu Pro Gly Lys
545 550 555 560

Pro Gly Pro Pro Gly Asp Ala Gly Leu Gln Gly Leu Pro Gly Val Pro
565 570 575

Gly Ile Pro Gly Ala Lys Gly Val Ala Gly Glu Lys Gly Ser Thr Gly
580 585 590

Ala Pro Gly Lys Pro Gly Gln Met Gly Asn Ser Gly Lys Pro Gly Gln
595 600 605

Gln Gly Pro Pro Gly Glu Val Gly Pro Arg Gly Pro Gln Gly Leu Pro
610 615 620

Gly Ser Arg Gly Glu Leu Gly Pro Val Gly Ser Pro Gly Leu Pro Gly
625 630 635 640

Lys